BKG Regional IGS Data Center Report 2001

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1 Introduction

The Federal Agency for Cartography and Geodesy (BKG) operates the Regional IGS Data Center for Europe since the beginning of the IGS Test Campaign in June 21, 1992. GPS tracking data from permanent GPS sites in Europe are obtained from Operational Data Centers (ODC's), Local Data Centers (LDC's), or directly from the stations. Also tracking data from stations outside of Europe are transferred to BKG, if a European institution operates these stations. The received data are uploaded to the Global Data Centers (GDCs), and are also made available to other users. The IGS products as computed by the IGS Analysis Centers are downloaded from the GDC's to BKG in order to provide this information to European users. GPS observation data from the EUREF Permanent GPS Network (EPN) and mixed GPS/GLONASS observation files from the IGEX/IGLOS GLONASS Experiment are also available. A subset of the IGS, EUREF, and IGLOS stations deliver hourly observation files to BKG additionally to the daily files. BKG holds the data files from different projects in separate directories in order to handle the project related restrictions, e.g., the project specific user access. A project independent access is additionally realized through a list of all stations and links to the corresponding subdirectories.

2 Activities in 2001

In 2001 BKG has started to upload all hourly IGS observation files additionally to the SOPAC archive at the Scripps Institution of Oceanography for backup purpose. This was one of the first steps to establish a global redundancy of hourly observation files for near real time applications. A new RAID disk system with 2 x 250 GB capacity had been installed for the storage of the data in December. The first 250 GB are mirrored to the second ones. This makes it possible to easily change one disk in case of a disk crash. Currently the IGS data for approximately 3 years could be hold online.

3 File Transfers

Figure 1 shows the number of transferred RINEX observation files in the year 2001. Any other files types are not shown here because these files are the most important. Figures 2 and 3 show the latency of the observations files. About 80 % of the IGS observation files had been available at the BKG within 12 hours, which is in time for daily and weekly data processing. More than 40 % of the IGS hourly files had been submitted to BKG within 6 minutes. After the installation of a new firewall at BKG in the year 2000 there is currently no information about user activities available, because all external users show up with the same user name in our log-files.

4 Outlook

New ftp server software had been installed in 2002, which now has no write permission for the anonymous ftp user. IGS members need a user account and password to upload files to BKG. After login the users are immediately connected to the correct directory to store the files. It is planned to improve the web-based administration of the data center and the user interface. For that purpose currently a new data center structure is under development, which is based on the LAMP (Linux operation system, Apache web server, MySQL data bank and PHP script language) server concept. These new developments allow integrating new ideas that may be addressed by the newly established IGS data center working group.

Figure 1

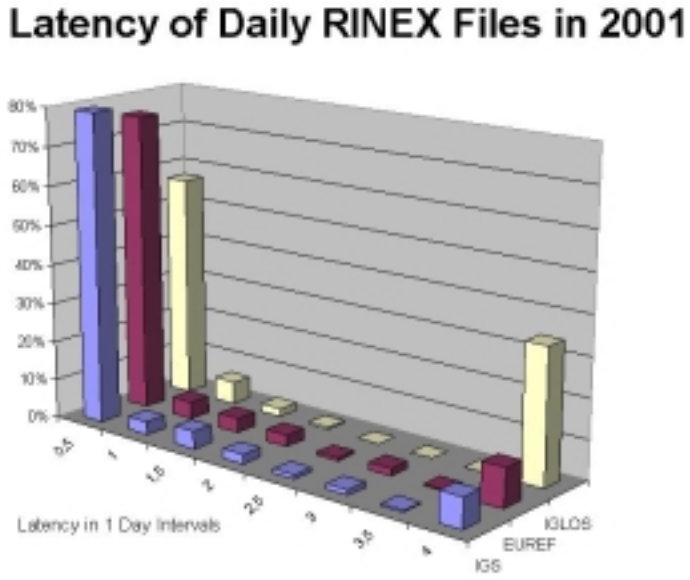

Figure 2

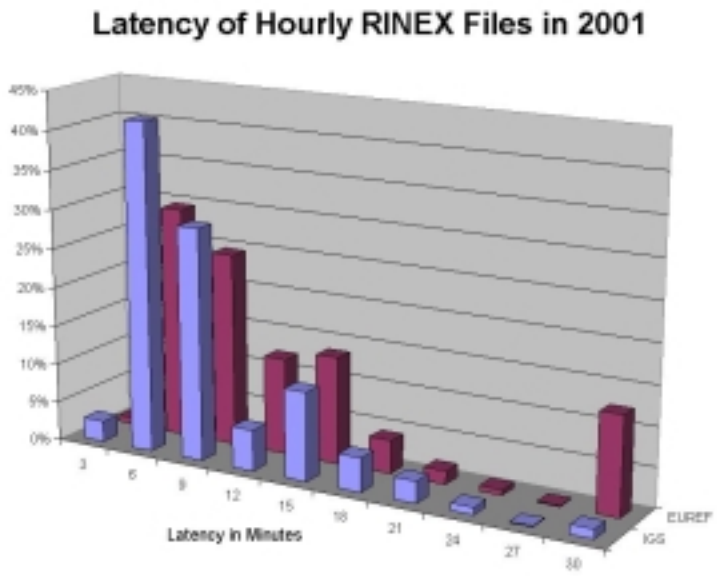

Figure 3